

FIG. 1

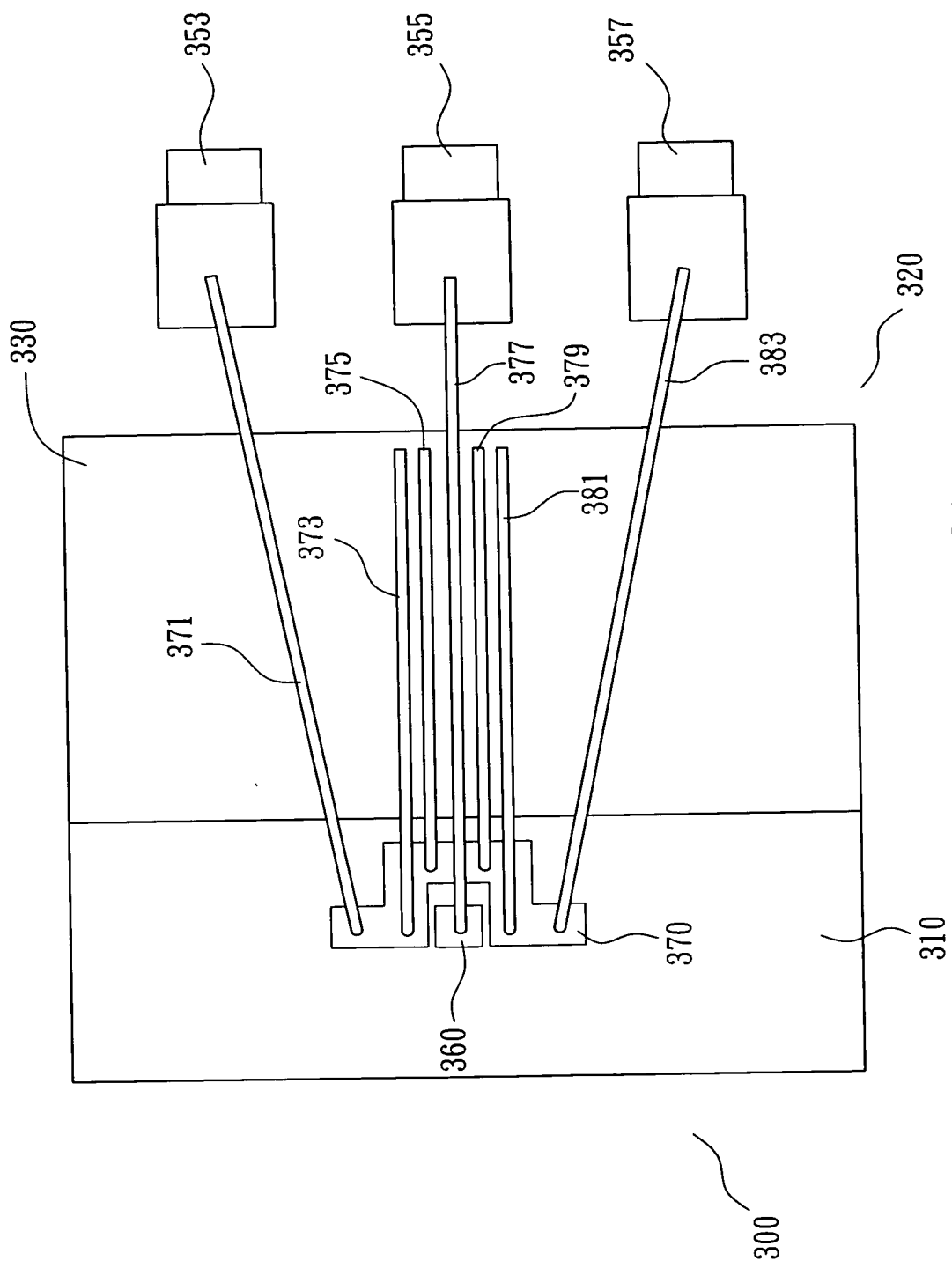
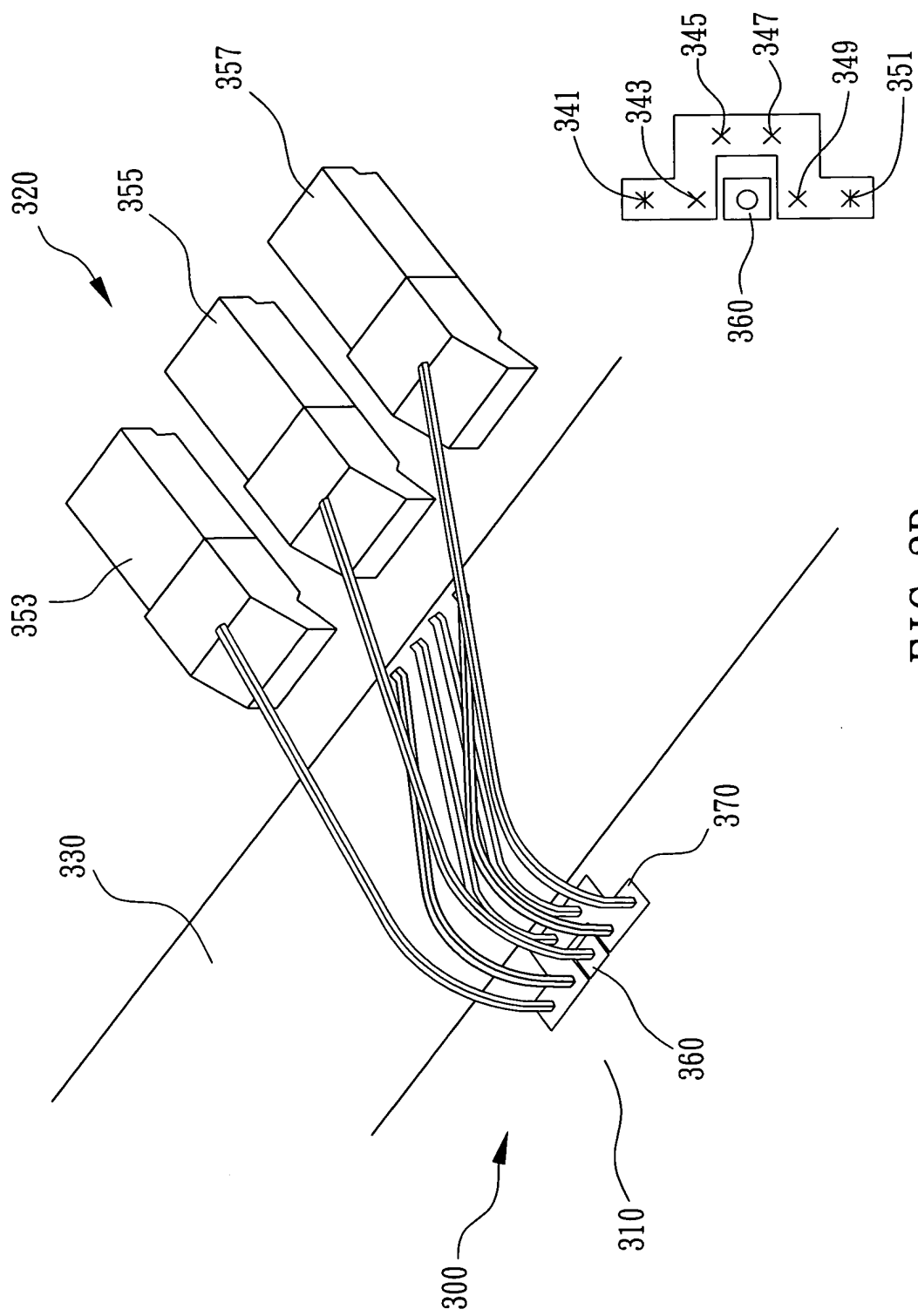


FIG. 3A



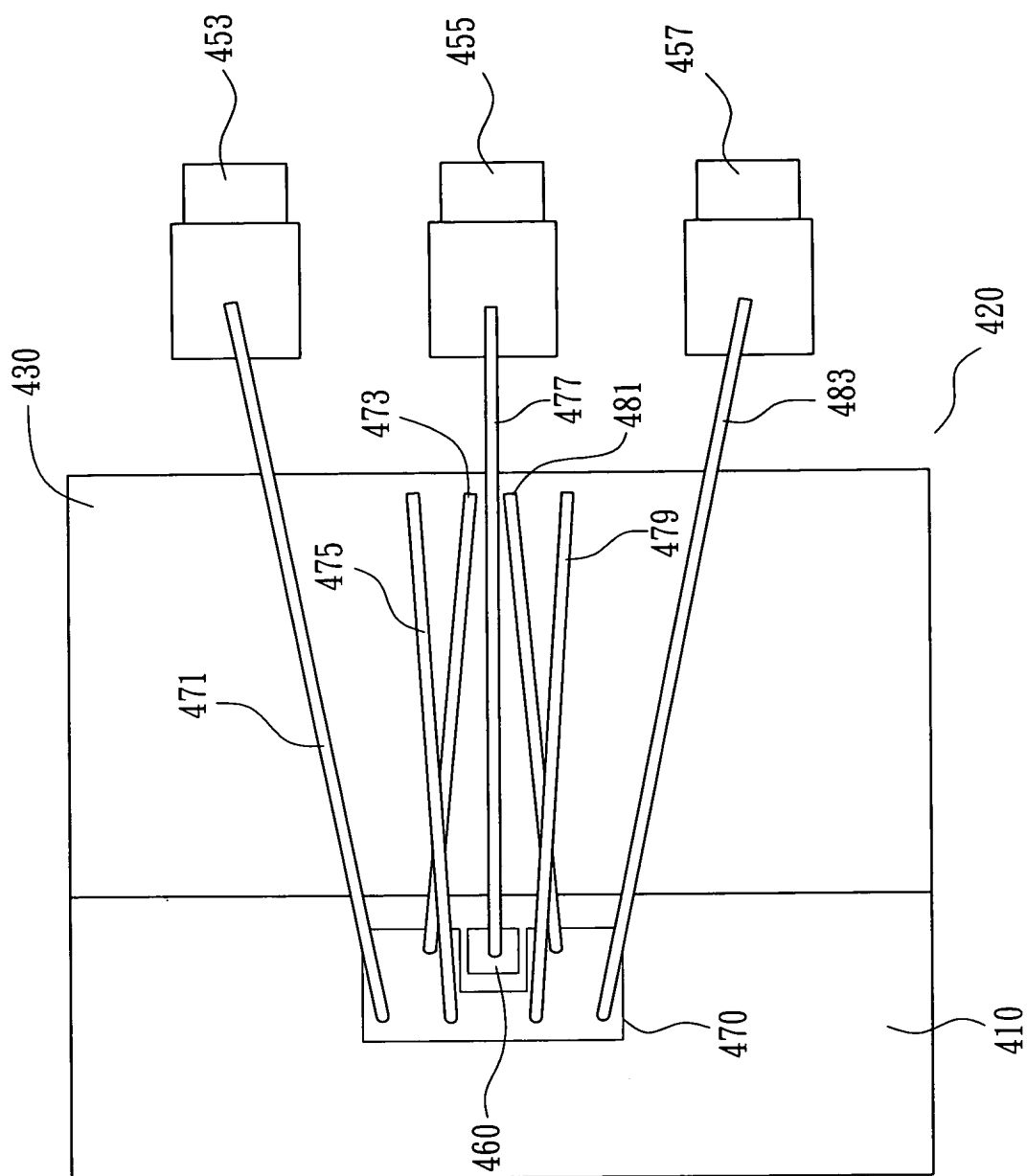
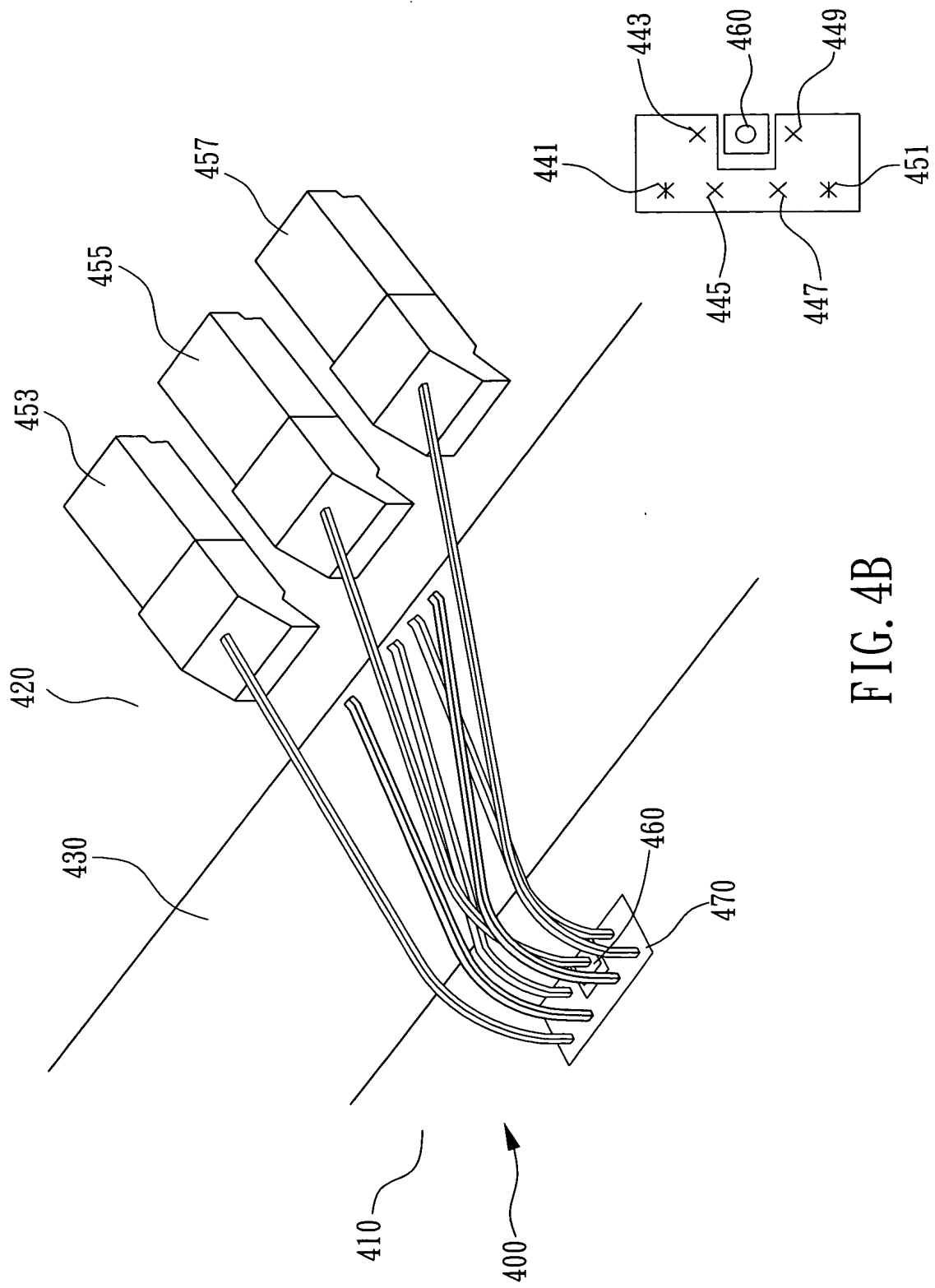


FIG. 4A



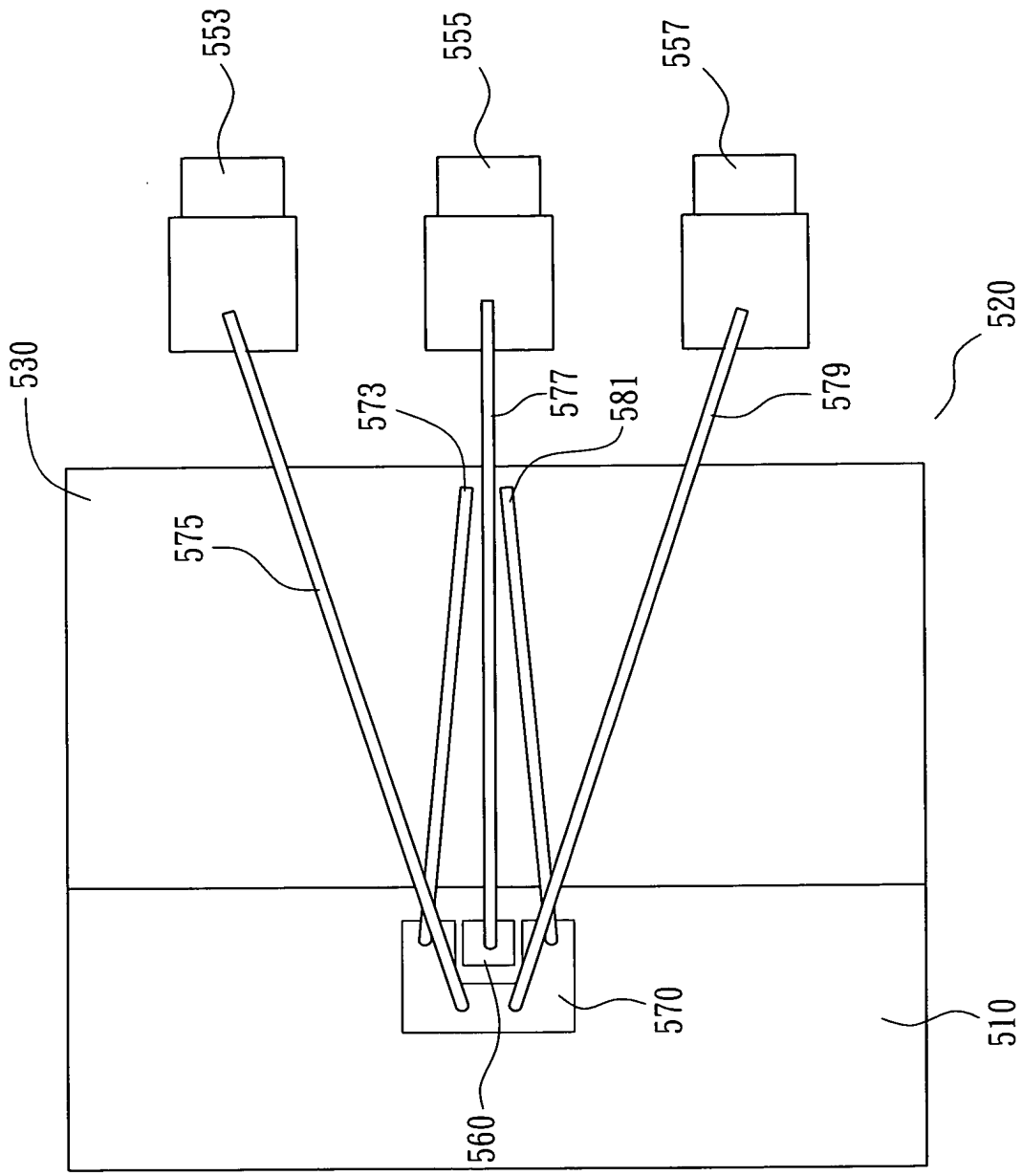


FIG. 5A

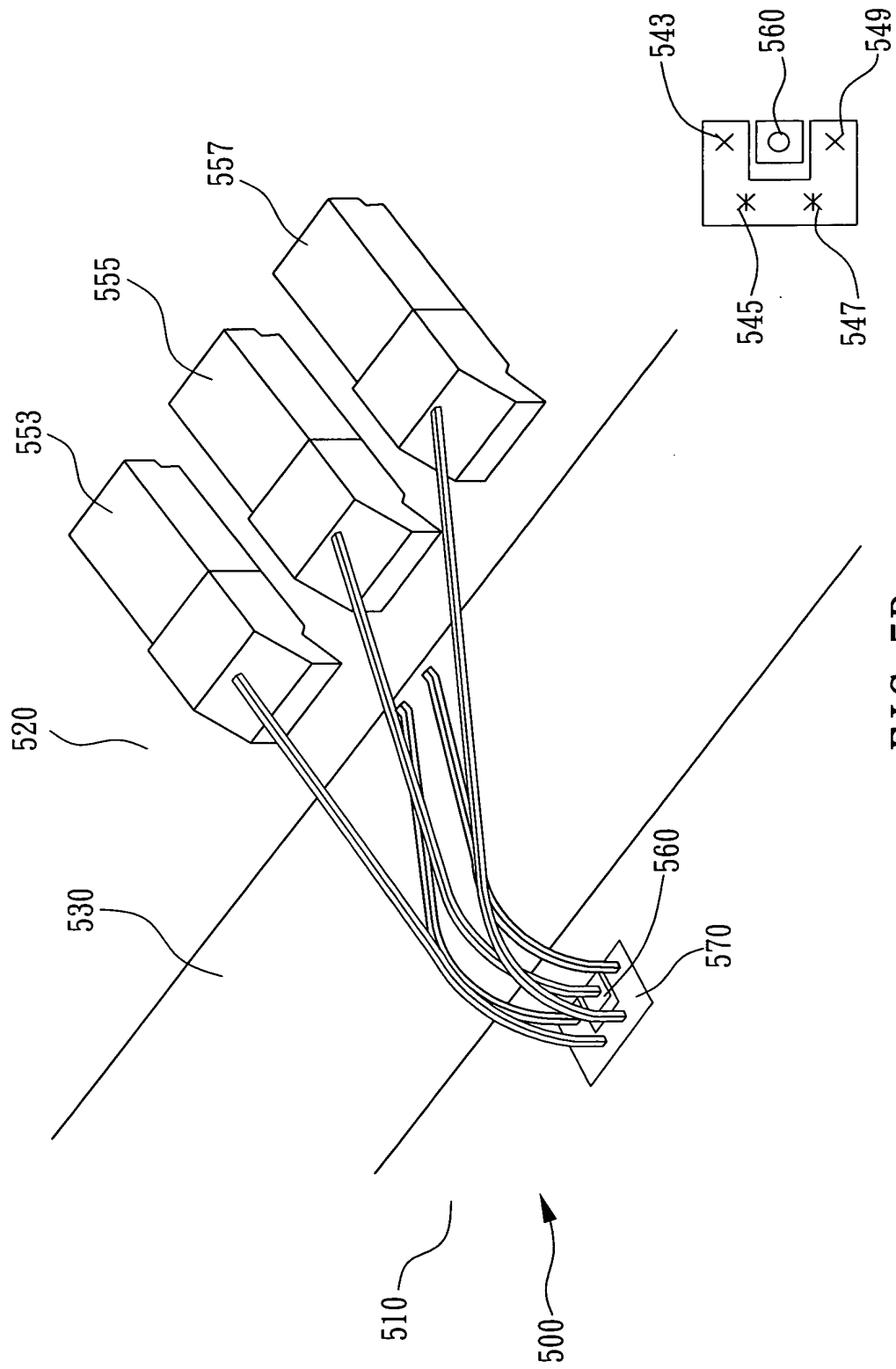


FIG. 5B

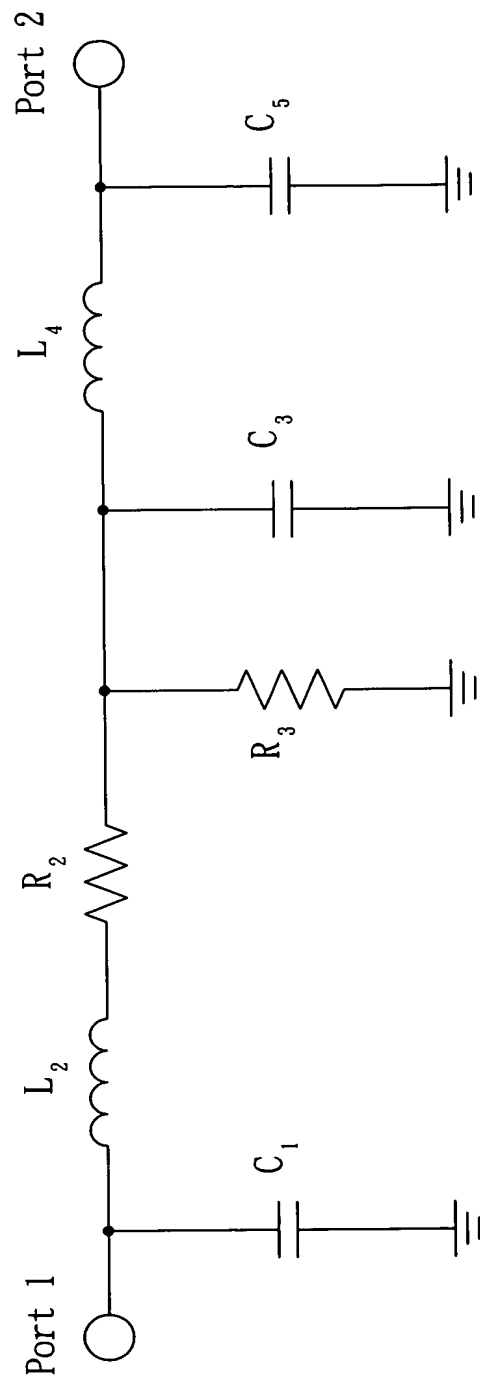


FIG. 6

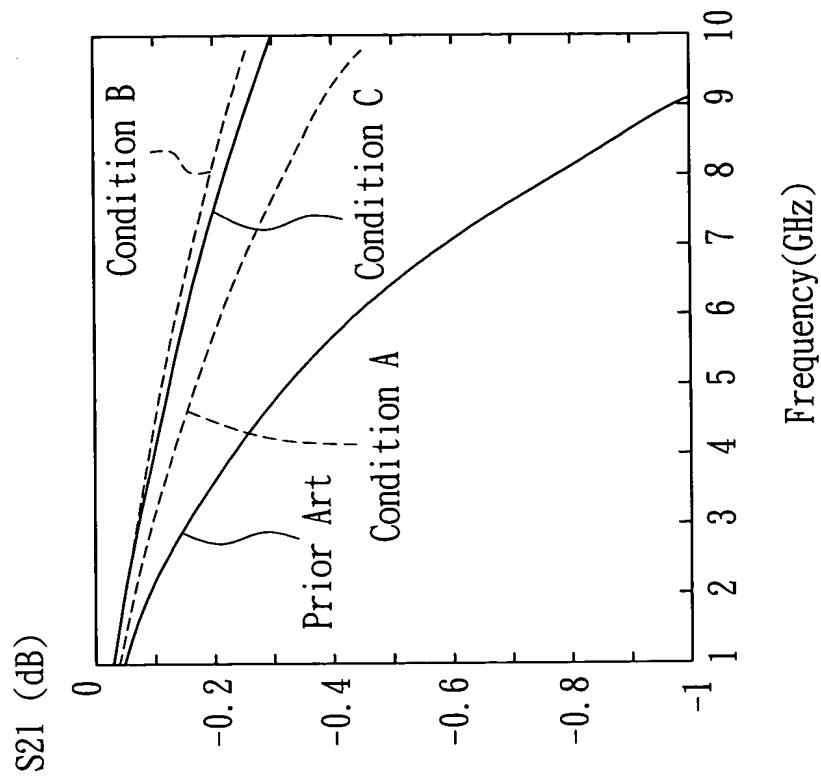


FIG. 7A

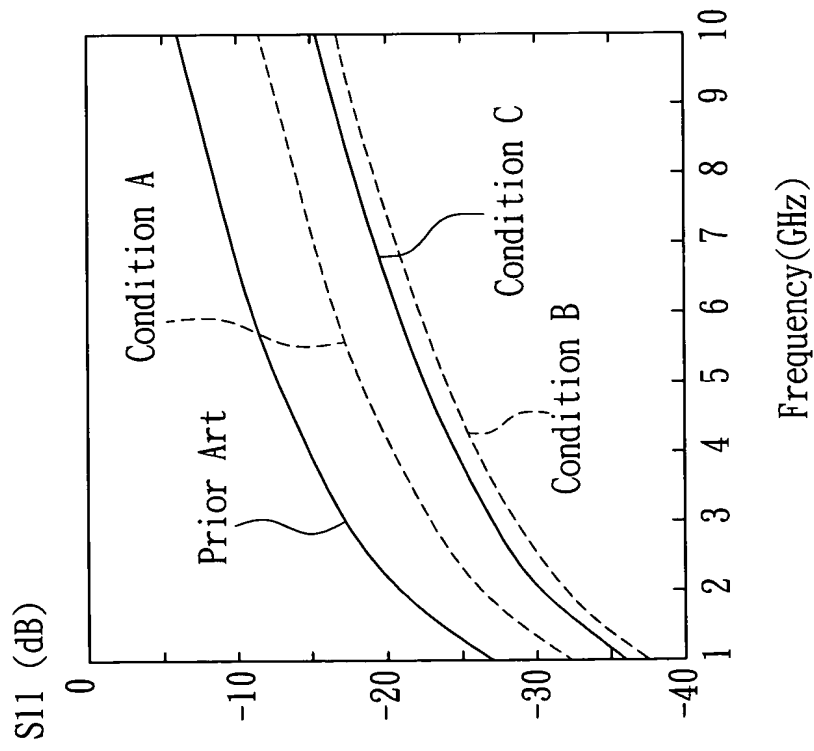


FIG. 7B

	Parameters of Lumped Circuit of FIG. 6	Approximate $L_{\text{total}} \approx C_{\text{total}}$
Prior Art	$C_1=0.114 \text{ pF}$, $C_3=0.257 \text{ pF}$, $C_5=0.036 \text{ pF}$, $L_2=1.325 \text{ nH}$, $L_4=0.385 \text{ nH}$, $R_2=0.400 \Omega$, $R_3=13.239 \text{ K}\Omega$	$C_{\text{total}} \approx 0.407 \text{ pF}$, $L_{\text{total}} \approx 1.710 \text{ nH}$
Condition A	$C_1=0.122 \text{ pF}$, $C_3=0.240 \text{ pF}$, $C_5=0.078 \text{ pF}$, $L_2=0.919 \text{ nH}$, $L_4=0.551 \text{ nH}$, $R_2=0.445 \Omega$, $R_3=10.213 \text{ K}\Omega$	$C_{\text{total}} \approx 0.440 \text{ pF}$, $L_{\text{total}} \approx 1.470 \text{ nH}$
Condition B	$C_1=0.115 \text{ pF}$, $C_3=0.245 \text{ pF}$, $C_5=0.077 \text{ pF}$, $L_2=0.757 \text{ nH}$, $L_4=0.529 \text{ nH}$, $R_2=0.333 \Omega$, $R_3=17.998 \text{ K}\Omega$	$C_{\text{total}} \approx 0.437 \text{ pF}$, $L_{\text{total}} \approx 1.286 \text{ nH}$
Condition C	$C_1=0.115 \text{ pF}$, $C_3=0.243 \text{ pF}$, $C_5=0.076 \text{ pF}$, $L_2=0.788 \text{ nH}$, $L_4=0.524 \text{ nH}$, $R_2=0.372 \Omega$, $R_3=14.614 \text{ K}\Omega$	$C_{\text{total}} \approx 0.434 \text{ pF}$, $L_{\text{total}} \approx 1.312 \text{ nH}$

Table 1

	2.5 GHz		5 GHz		10 GHz	
	Return Loss(dB)	Insertion Loss(dB)	Return Loss(dB)	Insertion Loss(dB)	Return Loss(dB)	Insertion Loss(dB)
Prior Art	19.37	0.12	13.42	0.32	6.86	1.23
Condition A	24.71	0.08	18.80	0.16	12.29	0.45
Condition B	30.10	0.07	24.17	0.12	17.01	0.26
Condition C	28.79	0.07	22.85	0.12	15.78	0.29

Table 2